



*Transportation Energy*  
*Energie des transports*

Natural Gas for Vehicles  
Industry Survey 1985

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## TABLE OF CONTENTS

|                                               | Page |
|-----------------------------------------------|------|
| Executive Summary                             | 1    |
| Résumé pour la Direction                      | 2    |
| Introduction                                  | 3    |
| Natural Gas Vehicle Program Data              | 4    |
| Installer Survey Results                      | 11   |
| Number of Conversions                         | 11   |
| Operation and Maintenance                     | 11   |
| Marketing and Promotion                       | 12   |
| Natural Gas Supply/Demand in Canada           | 12   |
| Natural Gas Pricing                           | 13   |
| Appendix A - Natural Gas Pump Prices          | 14   |
| Appendix B - Public NGV Stations in Operation | 15   |

NATURAL GAS FOR VEHICLES - INDUSTRY SURVEY

Executive Summary

Natural Gas Vehicle Program data reveals that B.C. and Quebec are the most active NGV provinces. The total number of conversions under the NGV Program (and the earlier CNG Demonstration Program) was 3,309 vehicles at the end of May this year. The survey of the installers across Canada, however, indicated that there were an estimated 5,000 to 5,100 vehicles operating on natural gas at that time.

Private use vehicles make up a substantial proportion of those vehicles converted under the Program (18.9%), followed by service industries, taxi companies and manufacturers. This scenario changes from one province to another, and a breakdown by province is therefore provided in the report. This is also true of the vehicle types. Overall, automobiles make up 37% of the vehicles converted under the Program, followed by pick-up trucks and vans.

Most of the conversion companies provide a one year guarantee on conversions, and the majority of installers target their business towards both fleets and individuals. Those installers who perform service and maintenance work reported few problems with the installations, the most common one being minor adjustments during the initial stages.

Reserves of natural gas in Canada represent about 30 years of supply at the current rate of production. Demand is projected to rise sharply in the next five years, and then decline during the 1990s. Productive capacity is expected to decline until it equals domestic demand by the early 2000s.

Canada and the producing provinces have agreed to develop, together with consuming provinces and the natural gas industry, a market-responsive pricing system to be implemented by November 1, 1985. The objective is to allow prices to be negotiated between buyers and sellers of natural gas.

### RESUME POUR LA DIRECTION

Les données concernant le Programme des véhicules au gaz naturel (PVGN) révèlent que c'est au Québec et en Colombie-Britannique qu'il y a le plus de véhicules au gaz naturel. Le nombre total de conversions en vertu du PVGN (et de l'ancien Programme de démonstration du gaz naturel comprimé) était de 3,309 à la fin de mai. Le sondage exécuté auprès des installateurs dans toutes les régions du Canada a toutefois montré que de 5,000 à 5,100 véhicules fonctionneraient au gaz naturel.

Les véhicules privés constituent une fraction importante des véhicules modifiés en vertu du Programme (18,9%). Viennent ensuite les industries de service, les taxis et les fabricants. Ce scénario étant différent suivant les provinces, il y a une ventilation par province dans le rapport. Il en va de même des types de véhicules. En général, les automobiles comptent pour 37% des véhicules modifiés en vertu du Programme, devançant les camionnettes et les fourgonnettes.

La plupart des conversions au gaz naturel ont été exécutées après l'achat du véhicule. En général, les sociétés spécialisées dans la conversion accordent une garantie d'un an et la plupart des installateurs recherchent la clientèle tant des exploitants de parcs de véhicules que des particuliers. Les installateurs qui assurent l'entretien et la réparation rapportent qu'ils ont peu de problèmes avec les installations, le plus fréquent ne demandant que des ajustements mineurs au tout début.

Au rythme actuel de production de gaz naturel, le Canada peut compter pendant encore 30 ans environ sur ses réserves de gaz naturel. La demande devrait augmenter de façon radicale au cours des cinq prochaines années et diminuer au cours des années 1990. La capacité de production devrait baisser jusqu'à ce qu'elle corresponde à la demande intérieure au plus tard au début des années 2000.

Le Canada et les provinces productrices ont convenue d'élaborer, de concert avec les provinces consommatrices et l'industrie du gaz naturel, un régime de tarification réactif au marché qui sera mis en oeuvre d'ici au 1<sup>er</sup> novembre 1985. L'objectif est de permettre aux acheteurs et aux vendeurs de négocier entre eux les prix du gaz naturel.

## Introduction

This report provides up-to-date Natural Gas Vehicle Program data and outlines the results of a telephone survey of 60 natural gas conversion installers across Canada. The intent of the survey was to provide an informed estimate of the number of natural gas vehicles currently in operation in Canada, and also to obtain additional information concerning natural gas vehicle conversions. Some of the topics covered were: promotion, target clientele, guarantees offered, operating problems and refueling.

Natural gas for vehicles (NGV) is sold by the kilogram or by litre equivalent (the amount of natural gas which contains the same amount of energy as a litre of gasoline). A May 1985 survey of regular leaded gasoline prices and natural gas prices at stations from British Columbia to Québec revealed that a litre equivalent of NGV costs an average of 22 cents less than a litre of regular unleaded gasoline. This price difference can obviously translate quickly into substantial savings for the fleet operator.

Several provincial governments have attempted to encourage conversion to alternative fuels by eliminating road taxes. The absence of these taxes makes natural gas even more economical to use. As a related incentive, British Columbia, Alberta and Ontario do not charge sales tax on conversion kits, and in Ontario there is no sales tax on a new natural gas powered vehicle (or on a used vehicle converted within one month of purchase). Many utilities offer grants and financing packages to encourage the development of natural gas fueling facilities and vehicle conversions.

The federal government offers contributions of up to \$50,000 per refueling site under the Natural Gas Fueling Station Contribution Program toward the capital costs of installing refueling facilities. A total of 125 fueling stations are expected to receive contributions under the Program in the period from 1982 to 1987, and EMR will receive operating data from those stations over a two year period. The response to this Program has been encouraging. As of July, 1985 100 applications had been approved. The final deadline for submission of applications for this Program is November 30, 1985.

The Compressed Natural Gas Demonstration Program was implemented in 1982 to demonstrate natural gas vehicle operation and to develop precedents for safety and equipment standards. Under this Program, a prelude to the current Natural Gas Vehicle Program (NGVP), the costs of converting a vehicle for natural gas use were subsidized to the amount of \$600 for each vehicle conversion. The Program expired in March 1983, with contributions having been paid for 490 vehicles.

The Natural Gas Vehicle Program continues the work begun under the CNG Demo Program, providing taxable contributions of up to \$500 toward each eligible natural gas vehicle. All individuals, corporations and organizations permanently resident in Canada, with the exception of federal and provincial departments, agencies or Crown Corporations, are eligible to apply for the contribution. Both single and dual fuel systems are allowed under the Program.

### Natural Gas Vehicle Program Data

The Natural Gas Vehicle Program generates a substantial data bank which includes information on Program take-up, claimant type, and vehicle type, as claims are received under the system. Figures are also available on the conversion type (whether the conversion was done before or after the vehicle was purchased).

To May 31 this year, contributions had been paid out for 3,309 vehicles under the Program (including the CNG Demo Program). The distribution by province is shown in Figure 1 as percentages only. It is evident that B.C. and Québec are the most active provinces, although the number of conversions in Ontario is increasing rapidly now that the number of fueling stations is growing.

FIGURE 1

### NATURAL GAS VEHICLE PROGRAM VEHICLES CONVERTED - REGIONAL DISTRIBUTION TO 31 MAY 1985

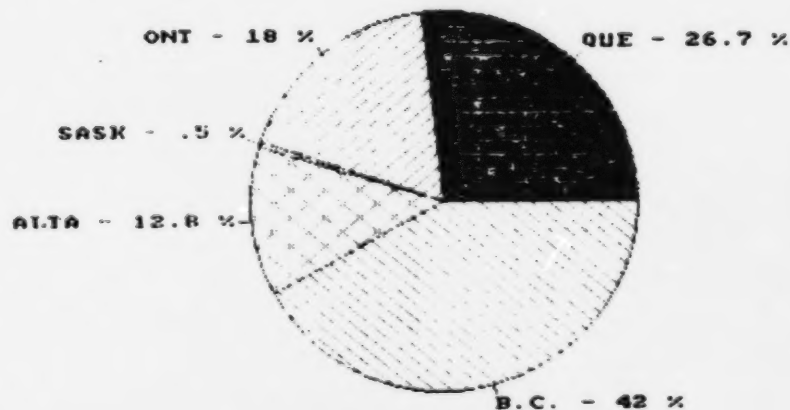


Figure 2 gives the actual numbers of conversions by province.

FIGURE 2

Natural Gas Vehicle Program  
Vehicles converted - Regional Distribution  
To May 31, 1985

| Province | CNG Demo Program | Natural Gas Vehicle Program | Total |
|----------|------------------|-----------------------------|-------|
| Québec   | 94               | 790                         | 884   |
| Ontario  | 81               | 515                         | 596   |
| Sask.    | 10               | 6                           | 16    |
| Alberta  | 51               | 374                         | 425   |
| B.C.     | 254              | 1134                        | 1388  |
| Totals   | 490              | 2819                        | 3309  |

To the end of July, 1985 the total number of vehicles for which a \$500.00 grant has been paid is 4,145.

Figure 3 indicates on a national basis the types of organizations that have been converting their vehicles to natural gas, as well as the percentage of private individuals who have done so. It is interesting to note that 18.9 percent of all vehicles converted under the Program to May 31st were privately owned. The category called "Other" includes all applicants who did not supply a claimant type, as well as utilities and such industries as mining and oil and gas exploration that do not fit under any of the given categories. Following private usage vehicles, the service industries account for a major proportion of the vehicles converted, then taxis and manufacturers. Farming, contractors, trucking companies, government, sales, and other categories follow in descending order of percentage.

Figure 3

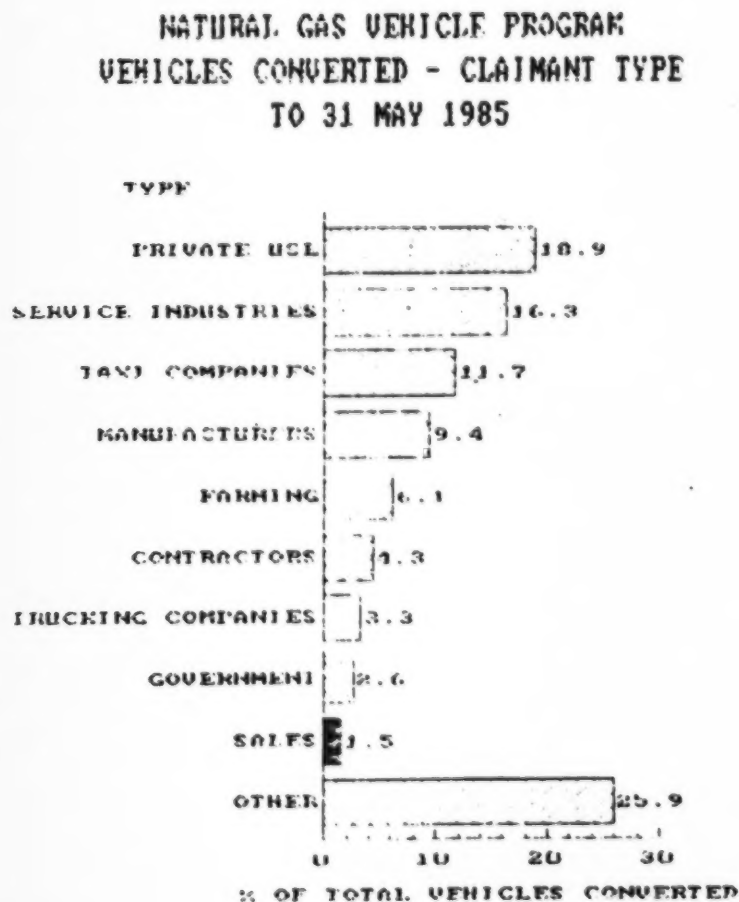


Figure 4 is a further breakdown of claimant type by province.

Figure 4

Natural Gas Vehicle Program  
Claimant Type By Province

|                                                 | <u>PROVINCE</u>      |                      |                      |                      |                     |
|-------------------------------------------------|----------------------|----------------------|----------------------|----------------------|---------------------|
|                                                 | Québec               | Ontario              | Sask                 | Alta                 | B.C.                |
| Taxi Company                                    | 26.9%                | 0.6%                 | -                    | 1.2%                 | 9.5%                |
| Trucking Company                                | 5.9%                 | -                    | -                    | 0.3%                 | 4%                  |
| Manufacturer<br>Wholesaler<br>Retailer          | 15.9%                | 5.0%                 | -                    | 3.2%                 | 8.7%                |
| Contractor                                      | 4.1%                 | 1.5%                 | -                    | -                    | 7.1%                |
| Service Industry                                | 5.2%                 | 39.6%                | 33.3%                | 0.9%                 | 17.9%               |
| Sales (Direct<br>Sales Sales-<br>man)           | 2.1%                 | 1.0%                 | -                    | -                    | 2%                  |
| Private Use                                     | 10.5%                | 14.2%                | 50%                  | 2.1%                 | 32.4%               |
| Farming                                         | 7.4%                 | 6.8%                 | -                    | 0.3%                 | 6.8%                |
| Municipal Or<br>Other Govern-<br>ment authority | 1.4%                 | 2.7%                 | -                    | -                    | 4.2%                |
| Other                                           | <u>20.6%</u><br>100% | <u>28.6%</u><br>100% | <u>16.7%</u><br>100% | <u>92.1%</u><br>100% | <u>7.4%</u><br>100% |

Figures 5 and 6 depict the conversions by vehicle type, Figure 5 giving an overall national summary, and Figure 6 being the detailed breakdown by province.

Figure 5

NATURAL GAS VEHICLE PROGRAM  
VEHICLES CONVERTED - VEHICLE TYPE  
TO 31 MAY 1985

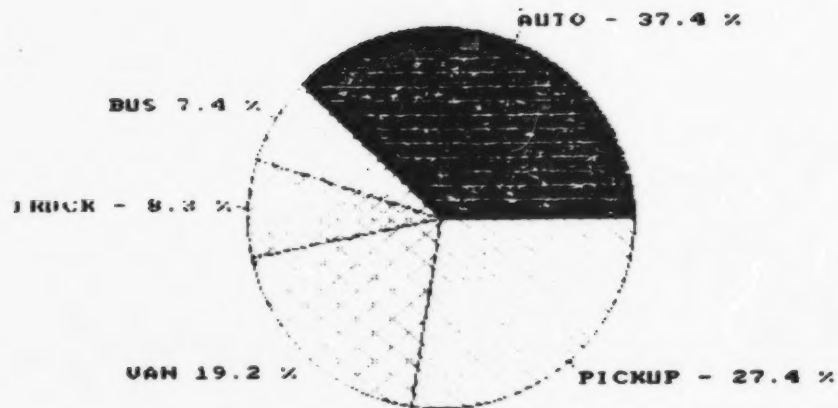


FIGURE 6  
Natural Gas Vehicle Program  
Vehicle Type by Province

|                         | Québec      | Ontario     | Alberta     | B.C.        |
|-------------------------|-------------|-------------|-------------|-------------|
| Auto 4 Cyl.             | 16.2%       | 14.4%       |             | 0.8%        |
| Auto 6 Cyl.             | 12.8%       | 10.6%       |             | 11.5%       |
| Auto 8 Cyl.             | 31%         | 10.8%       | 16.7%       | 5.4%        |
| Pick-ups under 6000 GVW | 12.4%       | 21.3%       | 16.7%       | 18.5%       |
| Pick-ups over 6000 GVW  | 1.7%        | 3.5%        | 16.7%       | 28.6%       |
| Vans under 10,000 GVW   | 15.2%       | 19.8%       | 33.3%       | 6.7%        |
| School Buses            | 1.9%        | 7.3%        |             | 27.3%       |
| Vans over 10,000 GVW    | 0.5%        | 0.8%        |             | 0.3%        |
| Trucks under 10,000 GVW | 2.8%        | 4.0%        |             | 0.3%        |
| Trucks under 14,000 GVW | 3.2%        | 1.7%        | 16.7%       |             |
| Trucks under 19,000 GVW |             | 0.6%        |             |             |
| Trucks under 26,000 GVW | 1.2%        | 3.5%        |             |             |
| Trucks under 33,000 GVW | 0.1%        | 1.0%        |             | 0.8%        |
| Not Supplied Vehicle    | 0.5%        | 0.2%        |             |             |
| Trucks over 33,000 GVW  |             | 0.2%        |             |             |
| Trucks under 16,000 GVW |             | 0.2%        |             |             |
| Transit Buses           | 0.1%        |             |             |             |
| Diesel                  |             | 0.2%        |             |             |
| Other Vehicles          | 0.3%        |             |             |             |
|                         | <u>100%</u> | <u>100%</u> | <u>100%</u> | <u>100%</u> |

Overall, 98% of the natural gas vehicles were converted after being purchased. In Ontario, 92% were converted after purchase, and 8% were converted prior to purchase.

The mean cost of conversion is given below by province and vehicle type. It should be noted that in the larger truck categories the number of vehicles is very low.

FIGURE 7

NATURAL GAS VEHICLE PROGRAM

MEAN CONVERSION COST BY VEHICLE TYPE

TO 31 MAY, 1985

| VEHICLE TYPE            | QUEBEC     | ONTARIO    | SASKATCHEWAN | ALBERTA    | BRITISH COLUMBIA |
|-------------------------|------------|------------|--------------|------------|------------------|
| Automobile 4-cyl.       | \$1,750.00 | \$1,800.00 | \$1,846.00   | \$1,482.59 | \$1,958.00       |
| " 6-cyl.                | 1,950.00   | 1,950.00   | 1,669.72     | 1,866.70   | 2,100.00         |
| " 8-cyl.                | 2,025.00   | 2,050.00   | 2,200.00     | 1,936.03   | 2,128.23         |
| Pickup under 6000 lbs.  | 2,200.00   | 2,200.00   | 3,806.86     | 2,754.72   | 2,426.00         |
| " over 6000 lbs.        | 2,350.00   | 2,373.08   | 2,173.11     | 2,425.00   | 2,500.00         |
| Van under 10000 lbs.    | 2,000.00   | 2,200.00   | 2,100.00     | 2,849.64   | 2,520.66         |
| Van over 10000 "        | 2,350.00   | 2,482.50   | -            | 1,520.00   | 2,950.00         |
| Trucks under 10000 lbs. | 2,900.00   | 2,759.40   | -            | 2,350.00   | 2,600.00         |
| " under 14000 "         | 2,400.00   | 2,697.14   | 3,354.68     | -          | 2,700.00         |
| " under 16000 "         | -          | 3,382.01   | -            | -          | 3,100.00         |
| " under 19000 "         | -          | 2,839.17   | -            | -          | 3,170.00         |
| " under 26000 "         | 3,865.00   | 2,975.13   | -            | -          | 3,300.00         |
| " under 33000 "         | 1,904.90   | 3,300.00   | -            | 2,350.00   | 3,100.00         |
| " over 33000 "          | -          | 1,502.87   | -            | -          | 3,600.00         |
| Other Vehicles          | 2,200.00   | -          | -            | -          | 2,499.66         |
| Transit Buses           | 3,980.55   | -          | -            | 1,428.00   | 2,750.00         |
| School Buses            | 2,900.00   | 3,190.42   | -            | 1,060.00   | 1,795.28         |
| Diesel                  | -          | 2,478.39   | -            | -          | -                |

## Installer Survey Results

### Number of Conversions

A survey of the 60 conversion centres registered in the NGV Program data base was carried out in mid June, 1985. This included a few companies that had converted their own vehicles, but which are not installers as such.

According to the survey there were 5,000 to 5,100 vehicles operating on natural gas in Canada as of May 1985, with the provincial proportions being almost identical to those of the NGV Program. There are several reasons that the survey results indicated a greater number of vehicles than the NGV Program data. Conversions done prior to Program implementation were not eligible for grants; some conversions such as provincial government vehicles are not eligible; many applications have not yet been submitted or are in the system and would not be included in the Program figures; and a small number, for whatever reason, prefer not to apply for the grant.

### Operation and Maintenance

Of the installers surveyed, 79% said that service and maintenance were an important part of their business. Most (88%) provide a one-year guarantee on all conversions, and the other guarantees vary from 90 days to as long as one owns the vehicle.

When the installers were questioned about problems with natural gas vehicles, the most common response was the minor adjustments that are required following the conversion, especially to remedy electrical problems. This is really a breaking-in process. Regulators in particular require adjustments. The other most commonly mentioned "problem" was awareness. Many vehicle owners do not realize the implications of driving with natural gas, and are disappointed in range or other aspects, but this is an educational rather than a technical matter.

### Marketing and Promotion

When asked whether they target their business to fleets or individuals, 58% of the installers responded "both". Those specifying fleets made up 23% of the total, and 19% said that they concentrate on individuals and small fleet operators.

To promote business, most conversion companies (68%) advertise through the following media: flyers, billboards, notices posted at the Post Office, yellow pages, newspaper, radio (including talk shows) letters or phone calls. 42% reported that they actually visit fleet managers, and 24% can attribute a substantial proportion of their business to repeat business and word of mouth.

### Natural Gas Supply/Demand in Canada

The National Energy Board, in its technical report, Canadian Energy, Supply and Demand 1983-2005, established that natural gas reserves have been stable at about 81 exajoules since the end of 1982. Additions to reserves in 1983 and 1984 were approximately equal to production. These reserves represent about 30 years of supply at the current rate of production of 2.7 exajoules. The NEB also estimates that 44.5 exajoules of new gas will be developed in Western Canada between now and 2005.

The National Energy Board projects that natural gas demand is going to increase rapidly in the next five years with most of the forecasted increase attributable to exports. The NEB estimates exports will move up to about 90 percent of authorized volume by 1990.

A sharp decline in demand during the early 1990s coincides with the expiration of existing export licences. Though projections provide for substantial increments to reserves, it is expected that the productive capacity will gradually decline so that it will be about equal to domestic demand by the early 2000s.

### Natural Gas Pricing

Since 1975, the wholesale prices of Alberta natural gas sold in Saskatchewan, Manitoba, Ontario and Quebec have been administered under agreements between the governments of Canada and Alberta. During this period, natural gas prices were linked to crude oil prices.

From 1975 to 1981 gas prices were set at about 85 per cent of crude prices; from 1981 to the end of 1984 the relationship was 65 per cent. However, the natural gas industry and gas consumers have argued to governments that a pricing system that links gas prices to oil prices is inflexible and that a pricing regime that is responsive to natural gas market conditions is necessary.

Canada and the producing provinces have agreed to develop, together with consuming provinces and the natural gas industry, a market-responsive pricing system to be implemented on or before November 1, 1985. The objective is to allow prices to be negotiated between buyers and sellers of natural gas.

The federal government and the governments of producing provinces have agreed to establish a task force of senior officials to advise on the implementation of a market-sensitive system for natural gas pricing by November 2 of this year.

The task force will rely on assistance from representatives of the gas industry from both the producing and consuming sectors. As well, the governments of consuming provinces will be consulted to assure that their views are incorporated into the new gas pricing system.

For the interim period, April 1 to November 1, the governments of Canada and Alberta have agreed to freeze the Alberta Border Price of gas at its current level of \$2.79 per gigajoule. With the Alberta Border Price frozen, and the elimination of the Canadian Ownership Special Charge on natural gas on May 31, 1985, the current wholesale price of gas in eastern Canada is \$3.78.

Appendix A - Natural Gas Prices at Public Fueling Stations

NOTE: 1 LITRE EQUIVALENT OF GASOLINE IS  
 EQUAL TO 0.67 KG OF NATURAL GAS

NATURAL GAS FUELING STATION PRICES

|                                                     |      | July/84 | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May  | June | July/85 |
|-----------------------------------------------------|------|---------|------|-------|------|------|------|------|------|------|------|------|------|---------|
| <b>British Columbia</b>                             |      |         |      |       |      |      |      |      |      |      |      |      |      |         |
| - Husky Oil<br>(Vancouver)                          | d/KG | 39.9    | 39.9 | 39.9  | 39.9 | 39.9 | 39.9 | 42.0 | 39.9 | 39.9 | 40.9 | 40.9 | 42.0 | 42.0    |
| - Black Top & Blue Cabs<br>(Vancouver)              | d/KG | 51.0    | 51.0 | 51.0  | 51.4 | 51.0 | 51.0 | 51.0 | 51.0 | 51.0 | 41.0 | 41.0 | 41.0 | 41.0    |
| - Doug Logan's (P.C.)<br>(Richmond)                 | d/KG | 39.4    | 39.4 | 39.4  | 39.4 | 39.4 | 39.9 | 39.9 | 39.9 | 39.9 | 42.0 | 42.0 | 42.0 | 42.0    |
| - Shell Monark Oil<br>(Kamloops)                    | d/KG | 41.2    | 41.2 | 41.2  | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.2    |
| - National Energy Equipment<br>(Burnaby)            | d/KG | -       | 39.9 | 39.9  | 39.9 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 44.6 | 42.0    |
| - Prince George Taxi<br>(Prince George)             | d/KG | 41.2    | 41.2 | 41.2  | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0 | 41.0    |
| - Tundra Turbos<br>(Port St. John)                  | d/KG | -       | 39.9 | 39.9  | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9    |
| - Husky Oil<br>(Nepieridge)                         | d/KG | -       | -    | -     | -    | -    | -    | 42.0 | 39.9 | 39.9 | 42.0 | 42.0 | 42.0 | 42.0    |
| - PerVent Fuels<br>(Terrace)                        | d/KG | -       | -    | -     | -    | 43.0 | 43.0 | 43.0 | 49.0 | 49.0 | 49.0 | 49.0 | 49.0 | 49.0    |
| - Vernon Husky<br>(Vernon)                          | d/KG | -       | -    | -     | -    | 41.2 | 41.2 | 41.2 | 41.2 | 41.2 | 41.9 | 41.9 | 42.0 | 42.0    |
| - Yellow Cab Co. Ltd.<br>(Vancouver)                | d/KG | -       | -    | -     | -    | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9 | 39.9    |
| - Airport Gulf Service<br>(Vancouver)               | d/KG | -       | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 42.0 | 42.0    |
| - Husky Service<br>(Langley, B.C.)                  | d/KG | -       | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 42.0 | 42.0    |
| <b>Alberta</b>                                      |      |         |      |       |      |      |      |      |      |      |      |      |      |         |
| - Husky Oil<br>(Calgary)                            | d/KG | 39.8    | 39.8 | 39.8  | 39.8 | 39.8 | 39.8 | 39.8 | 39.8 | 39.8 | 39.8 | 42.0 | 42.0 | 36.0    |
| - Peillner Square Husky<br>Oil Service<br>(Calgary) | d/KG | -       | -    | -     | -    | -    | -    | -    | -    | -    | 42.0 | 42.0 | 42.0 | 36.0    |
| <b>Saskatchewan</b>                                 |      |         |      |       |      |      |      |      |      |      |      |      |      |         |
| - CMG Automech<br>(Regina)                          | d/KG | 37.5    | 37.5 | 37.5  | 39.5 | 39.5 | 39.5 | 39.5 | 39.5 | 39.5 | 39.5 | 39.5 | 39.5 | 39.5    |

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 OM/ERS, Ottawa  
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NATURAL GAS FUELING STATION PRICES (Continued)

|                                  | July | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar. | Apr. | May  | June | July/85 |
|----------------------------------|------|------|-------|------|------|------|------|------|------|------|------|------|---------|
| <b>Ontario</b>                   |      |      |       |      |      |      |      |      |      |      |      |      |         |
| - Shell Station (Toronto)        | d/KG | 36.0 | 36.0  | 36.0 | 36.0 | 39.9 | 39.9 | 39.9 | 43.9 | 43.9 | 43.9 | 43.9 | 43.9    |
| - Multi Fuel Marts (Ottawa)      | d/KG | -    | -     | -    | 44.9 | 44.9 | 44.9 | 44.9 | 44.9 | 44.9 | 44.9 | 44.9 | 44.9    |
| - S. Anglin (Kingston)           | d/KG | -    | -     | -    | -    | -    | 43.9 | 43.9 | 43.9 | 43.9 | 43.9 | 43.9 | 43.9    |
| - Save U Visa Bar (London)       | d/KG | -    | -     | -    | -    | -    | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | 39.0    |
| - L'il Papa's (Chatham)          | d/KG | -    | -     | -    | -    | -    | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | 39.0 | 39.0    |
| - Union Gas (Hamilton)           | d/KG | -    | -     | -    | -    | -    | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0 | 36.0    |
| - Pro-Gas (North Bay)            | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | 42.9 | 42.9 | 42.9 | 42.9    |
| - Shell Canada (North York)      | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Devey-Mel Fuels (Sudbury)      | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Shell Canada (Stobiceau)       | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Pebe Canning (Scarborough)     | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Shell Rapid-Lube (Mississauga) | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Petro-Canada (St. Catherine)   | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Shell Service (Scarborough)    | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |
| - Petro-Canada (Agincourt)       | d/KG | -    | -     | -    | -    | -    | -    | -    | -    | -    | -    | 43.9 | 43.9    |

Oil Pricing and Market Analysis Division  
 ORE/ENE, Ottawa  
 (513) 945-2500

NATURAL GAS FUELING STATION PRICES (Continued)

|                                  | July | Aug. | Sept. | Oct. | Nov. | Dec. | Jan. | Feb. | Mar.   | Apr. | May  | June | July/85 |
|----------------------------------|------|------|-------|------|------|------|------|------|--------|------|------|------|---------|
| <b>Quebec</b>                    |      |      |       |      |      |      |      |      |        |      |      |      |         |
| - Centre Shell<br>(St.-Léonard)  | 57.0 | 57.0 | 57.4  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 59.5   | 59.5 | 59.5 | 59.5 | 59.5    |
| - Gulf Station (Lachenaie)       | 57.0 | 57.0 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | closed | -    | -    | -    | -       |
| - Shell Station<br>(St.-Léonard) | 57.0 | 57.0 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 59.5   | 59.5 | 59.5 | 59.5 | 59.5    |
| - Ultramar (Longueville)         | 57.0 | 57.0 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 59.5   | 59.5 | 59.5 | 59.5 | 59.5    |
| - Ultramar (P. & M. Highway)     | -    | 57.0 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | -    | -      | -    | 59.5 | 59.5 | 59.5    |
| - Shell (Montreal-North)         | 57.0 | 57.0 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 59.5   | 59.5 | 59.5 | 59.5 | 59.5    |
| - Gulf (Sainte-Foy)              | 57.0 | 57.4 | 57.0  | 57.0 | 57.0 | 57.0 | 57.0 | 57.0 | 59.5   | 59.5 | 59.5 | 59.5 | 59.5    |
| - Station Gulf<br>(Dorval)       | -    | -    | -     | -    | -    | -    | -    | -    | -      | -    | -    | 59.5 | 59.5    |
| - Station Shell<br>(Lassalle)    | -    | -    | -     | -    | -    | -    | -    | -    | -      | -    | -    | 59.5 | 59.5    |

Appendix B - Public NGV Stations in Operation

Public Natural Gas Fueling Stations

August 9, 1985

British Columbia

Husky Oil Service Station  
750 West 70th Avenue  
Vancouver, British Columbia

Petro Canada Island Service  
11991 Steveston Highway  
Richmond, B.C.

Natural Gas Automotive  
Conversion Centre  
303 First Avenue  
Prince George, B.C.

Tundra Turbos  
7907-101 Avenue  
Fort St. John, B.C.

Yellow Cab Service  
1441 Clark Drive  
Vancouver, B.C.

Vernon Husky Service  
3401 - 32nd Street  
Vernon, B.C.

Husky Service  
19811 Fraser Highway (at Hwy 10)  
Langley, B.C.

Westwood Shell Service  
305 Lougheed Hwy  
(at Westwood)  
Coquitlam, B.C.

North Road Esso Service  
3965 North Road  
Burnaby, B.C.

Arbutus Shell  
2103 West Broadway  
Vancouver, B.C.

Farwest Fuels  
Hwy 16 E.  
Smithers, B.C.

Beachview Service Ltd.  
711 Beach Avenue  
Vancouver, British Columbia

Sahali Mohawk Service  
844 West Columbia Street  
Kamloops, B.C.

National Energy Equipment  
7353-6th Street  
Burnaby, B.C.

Husky Service  
21592 Lougheed Hwy.  
Mapleridge, B.C.

Farwest Fuels  
4904 Highway 16, West  
Terrace, B.C.

Husky Car/Truck Stop  
1335 Highway 97 South  
Williams Lake, B.C.

Airport Gulf Service  
Vancouver International  
Airport  
Vancouver, B.C.

Surrey Centre  
Shell Service  
9900 King George Hwy  
(at Fraser Hwy)  
Surrey, B.C.

Freeway Shell Self Service  
4505 Canada Way  
Burnaby, B.C.

Gulf  
2713-152nd Street  
White Rock, B.C.

Farwest Fuels  
221 3rd Avenue W.  
Prince Rupert, B.C.

Alberta

Husky Oil  
2525 32nd Avenue  
Calgary, Alta.

Husky Oil  
120 10th Avenue S.W.  
Calgary, Alberta

Ontario

Shell Service Station  
1285 The Queensway  
Toronto, Ontario

Anglin Fuels  
2268 Princess St.  
Kingston, Ontario

L'il Papa's  
700 Richmond St.  
Chatham, Ontario

Pro-Gas  
1848 Seymour St.  
North Bay, Ontario

Shell Canada  
3057 Dufferin Street  
North York, Ontario

Shell Rapid-lube  
1480 Britannia Road  
Mississauga, Ontario

Petrocanada  
270 Bunting Road  
St. Catharines, Ontario

Shell  
1201 Markham Road  
Scarborough, Ontario

Saskatchewan

CNG Autoenergy  
1850 First Avenue  
P.O. Box 1365  
Regina, Saskatchewan

Multi Fuel Marts  
1515 St. Laurent Blvd.  
Ottawa, Ontario

Save U Gas Bar  
294 Adelaide St. E.  
London, Ontario

Union Gas  
360 Strathairn Ave  
Hamilton, Ontario

Davey-Mei Fuels Ltd.  
800 Kingsway Avenue  
Sudbury, Ontario

Shell Canada  
627 Dixon Road  
Etobicoke, Ontario

Shell  
3100 Howard Avenue  
Windsor, Ontario

Petrocanada  
2904 Sheppard Ave. East  
Agincourt, Ontario

Fiba Canning  
2671 Markham Road  
Scarborough, Ontario

Quebec

Station Gulf  
11,000 Cote de Liesse  
Lachine, Quebec  
H8T 1A7

Station Ultramar  
2001 Chemin Chambly  
Longueil, Quebec

Station Gulf  
2940 boul. Laurier  
Ville de Sainte-Foy, Quebec

Station Ultramar  
5600 boul. Jean XXIII  
(coin Cote Richelieu)  
Ville de Trois-Rivieres Ouest, Québec

Station Gulf  
550 Monté des Sources  
Dorval, Québec

Station Shell  
9600 Henri Bourassa ouest  
Saint-Laurent, Quebec  
H4S 1N8

Station Shell  
6505 boul. Henri-Bourassa est  
Ville de Montreal-Nord, Quebec

Centre Shell Saint-Leonard  
5200 Boulevard Metropolitain  
Montreal, Quebec

Station Shell  
444 rue Lafleur  
Lasalle, Québec